

amino acid sequence

X-(Cys⁴¹-Cys¹³³)-Y

wherein

(Cys⁴¹-Cys¹³³) consists of Cys⁴¹ through Cys¹³³ of SEQ ID NO:2;

Y represents the carboxy terminal group of Cys¹³³, a carboxy-terminus amino acid residue of Ile¹³⁴, or a substituted amino acid residue, and

X represents a methionylated or nonmethionylated amine group of Cys⁴¹ or amino-terminus amino acid residue(s) selected from the group:

G

RG

NRG

KNRG (SEQ ID NO:3)

GKNRG (SEQ ID NO:4)

RGKNRG (SEQ ID NO:5)

ORGKNRG (SEQ ID NO:6)

GORGKNRG (SEQ ID NO:7)

RGORGKNRG (SEQ ID NO:8)

RRGORGKNRG (SEQ ID NO:9)

G RRGORGKNRG (SEQ ID NO:10)

KG RRGORGKNRG (SEQ ID NO:11)

GKG RRGORGKNRG (SEQ ID NO:12)

RGKG RRGORGKNRG (SEQ ID NO:13)

SRGKG RRGORGKNRG (SEQ ID NO:14)

NSRGKG RRGORGKNRG (SEQ ID NO:15)

ENSRGKG RRGORGKNRG (SEQ ID NO:16)

PENSRGKG RRGORGKNRG (SEQ ID NO:17)

NPENSRGKG RRGORGKNRG (SEQ ID NO:18)

ANPENSRGKG RRGORGKNRG (SEQ ID NO:19)

A ANPENSRGKG RRGORGKNRG (SEQ ID NO:20)

AA ANPENSRGKG RRGORGKNRG (SEQ ID NO:21)

AAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:22)

QAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:23)

ROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:24)

NROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:25)

BNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:26)

ERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:27)

RERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:28)

RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:29)

P RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:30)

LP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:31)

VLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:32)

AVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:33)

MAVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:34)

KOMAVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:35)

KOMAVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:36)

DKOMAVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:37) and

PDKOMAVLP RRERNROAAA ANPENSRGKG RRGORGKNRG (SEQ ID NO:38)

or a substitution or deletion variant of X, wherein said variant is in excess of 70% identical to an amino acid sequence of X as set forth above when four gaps in a length of 100 amino acids may be introduced to assist in that alignment, to provide *in vivo* production of said truncated GDNF protein.

32. (Amended) A method according to claim 31 [of treating Parkinson's Disease] comprising implanting in a patient a cell transformed with said [a] polynucleotide [sequence of Claim 13] to provide *in vivo* production of said truncated GDNF protein.

Please add the following new claims:

-- 45. A method according to Claim 31 or 32, wherein X is selected from the group consisting of SEQ ID NO: 3, 7, 8, 14, 17 and 18.

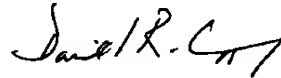
46. A method according to Claim 31 or 32, wherein X is G, RG or NRG.

47. A method according to Claim 31 or 32, wherein said GDNF protein product has the amino acid sequence of SEQ ID NO:42.

48. A method according to Claim 31 or 32, wherein said GDNF protein product has the amino acid sequence of SEQ ID NO:44.

49. A method according to Claim 31 or 32, wherein said GDNF protein product has the amino acid sequence of SEQ ID NO:46. --

Respectfully submitted,



Daniel R. Curry
Attorney for Applicant
Registration No.: 32,727
Phone: (805) 447-8102
Date: October 13, 2000

Please send all future correspondence to:

U.S. Patent Operations/ DRC
Dept. 4300, M/S 27-4-A
AMGEN INC.
One Amgen Center Drive
Thousand Oaks, California 91320-1799